

WHAT IS CLAIMED IS:

1. A method for preparing a stable iron nitrosylated hemoglobin which is converted to S-nitrosylated hemoglobin in the body, comprising the step of reacting deoxygenated hemoglobin and inorganic nitrite at mole ratios of nitrite to deoxygenated hemoglobin ranging from 1:10 to 1:1000 to form iron nitrosyl hemoglobin.
2. A method of blood product transfusion into a human patient in need of blood product transfusion, comprising the steps of co-incubating inorganic nitrite and blood substitute or red blood cells, comprising deoxygenated hemoglobin, at an initial mole ratio of nitrite to deoxygenated hemoglobin ranging from 1:10 to 1:1000 to form blood substitute or red blood cells product, containing iron nitrosyl hemoglobin, and transfusing the product containing iron nitrosyl hemoglobin into the patient.
3. A method of blood product transfusion into a human patient in need of a blood product transfusion, comprising the steps of co-infusing blood substitute or red blood cells and inorganic nitrite into the patient, the inorganic nitrite being infused at the rate of 0.01 to 10 micromoles per minute.
4. A method of providing composition for transfusion for use at a later time, comprising storing composition comprising blood, blood substitute, red blood cells, blood hemoglobin or combination of two or more thereof in admixture with nitric oxide or after inorganic nitrite pretreatment, to preserve function and any red blood cells.
5. Stored blood, stored blood substitute, stored red blood cells, stored blood hemoglobin or combination of two or more thereof in admixture with nitric oxide or after inorganic nitrite pretreatment, for use at a later time.
6. A method of treating a patient in need of nitric oxide therapy, comprising administering to the patient red blood cells or blood hemoglobin based therapeutic obtained by incubating red blood cells or blood hemoglobin, comprising deoxygenated hemoglobin, with inorganic nitrite, the mole ratio of nitrite to deoxygenated hemoglobin ranging from 1:10 to 1:1000 whereby the therapeutic contains iron nitrosyl hemoglobin.